

STANDARD CONSTRUCTION SPECIFICATIONS



CITY OF LEESBURG *The Lakefront City*

Raymond S. Sharp, Director of Environmental Services

223 S. 5th Street

Leesburg, Florida 34749

(352) 728-9835 Phone

(352) 326-8887 Fax

&

Lora L. Bailey, P.E., Director of Public Works

413 North Boulevard

Leesburg, Florida 34749

(352) 728-9875 Phone

(352) 728-9879

Prepared by:

Farner, Barley & Associates, Inc.

350 N. Sinclair Avenue

Tavares, Florida 32778

(352) 343-8481

(352) 343-8495 Fax

May, 2004

STANDARD CONSTRUCTION SPECIFICATIONS

TABLE OF CONTENTS

	Page
INTRODUCTION	6
SECTION 1 General Information	7
1.1 Authority	8
1.2 General	8
SECTION 2 Utility Excavation, Trenching and Backfilling	14
2.1 General	15
2.2 Materials	15
2.3 Workmanship	15
SECTION 3 Boring and Jacking	20
3.1 General	21
3.2 Materials and Installation	21
SECTION 4 Pipe, Fittings, Valves and Appurtenances	23
4.1 General	24
4.2 Pipe and Fittings	24
4.3 Valves	29
4.4 Installation	32
SECTION 5 Sanitary Gravity Sewers	35
5.1 General	36
5.2 Design Standards	36
5.3 Polyvinyl Chlorine (PVC) Sewers	39
5.4 Testing	41
SECTION 6 Sanitary Sewage Force Main	44
6.1 General	45
6.2 Design Standards	45
6.3 Standard Requirements	45
6.4 Testing	47
SECTION 7 Sewage Pumping Station	49
7.1 General	50
7.2 Design Standards	50
SECTION 8 Sewage Pumping Station RTU/Pump Control Panel.....	54
8.1 General.....	55
8.2 Drawings.....	56
8.3 Pre-Submittal Information.....	56
8.4 Guarantee.....	57
8.5 Scope.....	57
8.6 Control System and Control Panel.....	58
8.7 Lift Station Controller/Transceiver RTU I/O.....	63
8.8 Power Equipment.....	64
8.9 Backup Level Control.....	65
8.10 Local Alarm System.....	66
8.11 Shop Drawings.....	66
8.12 Field Supervision.....	67

TABLE OF CONTENTS (continued)

SECTION 9 Standby Diesel Engine Driven Generator with Weatherproof Enclosure.....	69
9.1 General.....	70
9.2 Products.....	74
9.3 Execution.....	88
SECTION 10 Water Distribution System	91
10.1 General	92
10.2 Design Standards	92
10.3 Standard Requirements	93
10.4 Testing	95
10.5 Disinfecting	96
SECTION 11 Electric Services	97
11.1 Temporary Overhead Service.....	98
11.2 Temporary Underground Service	98
11.3 Change of Service	99
11.4 Overhead Permanent Service.....	100
11.5 Underground Permanent Service	101
11.6 Temporary and Permanent Electric Installation Charges & Rules.....	102
11.7 Important Reminders	103
11.8 Procedure for Cutting or Removing Meter Seals	103

SECTION 12 Pavement Management and Rights-of-Way (Reserved)

SECTION 13 Stormwater (Reserved)

SECTION 14 Solid Waste Management (Reserved)

APPENDIX A Utility Details

General Details

G-1	Erosion Control Structure
G-2	Type I Floating Turbidity Barrier
G-3	Bedding Details
G-4	Piping Clearances
G-5	Water Line Crossing
G-6	Thrust Restraint Details
G-7	Boring and Jacking Detail
G-8	Locating Wire Splicing
G-9	Open Cut and Repair Detail
G-10	Concrete Walkway Detail
G-11	Sod Planting
G-12	Chain Link Fence Detail

Water Details

W-1	General Water Notes
W-2	Wet Tap Sleeve and Tap Valve
W-3	Gate Valve & Box
W-4	Butterfly Valve & Box
W-5	Valve Collar
W-6	Blowoff Detail
W-7	Temporary Jumper Connection Detail
W-8	Temporary Jumper Connection Notes
W-9	Water Service Connection Details
W-10	Service and Meter
W-11	Fire Hydrant With Valve
W-12	Fire Hydrant Reflector Detail

TABLE OF CONTENTS (continued)

	W-13	Fire Line Master Meter Assembly
	W-14	Combination Air Release & Air/Vacuum Valve for Water Mains
	W-15	Air Release Valve and Valve Vault for Water Main
	W-16	Reduced Pressure Backflow Preventer
	W-17	Water Meter/Backflow Preventer Assembly
Sanitary Details	S-1	Sanitary Precast Manhole Detail
	S-2	Pipe Connection to Precast Sanitary Manhole
	S-3	Typical Manhole Plan
	S-4	Standard Drop Manhole Connection
	S-5	Sanitary Sewer Service (Single)
	S-6	Sanitary Sewer Service (Double)
	S-7	Chimney Connection
	S-8	Trunk Line Clean-out Detail
	S-9	Gravity Cleanout
	S-10	Duplex Lift Station
	S-11	Triplex Lift Station
	S-12	Plug Valve & Box
	S-13	Combination Air Valve for Force Mains
	S-14	Valve Collar
	S-15	Grease Trap
Reuse Details	R-1	General Reuse and Effluent Reuse Notes
	R-2	Combination Air Release for Reuse Mains
	R-3	Reuse Water Service Connection Details

(Reserved)

**STANDARD
CONSTRUCTION SPECIFICATIONS
FOR THE
CITY OF LEESBURG, FLORIDA**

The Specifications set forth herein provide minimum standards for the construction of water, sewage and reuse transmission and collection facilities, as well as roadways, stormwater management systems and solid waste, meeting the following conditions:

1. Facilities to be constructed within the City of Leesburg rights-of-way.
2. Facilities to be turned over to the City of Leesburg for operation.
3. Facilities to become a permanent part of City of Leesburg utilities system.

These specifications are to describe minimum acceptable standards of construction and to promote uniformity where practical. It is felt that adherence to the standards presented in this booklet will benefit both the citizens of Leesburg and the operators of the facilities.

Water, sewer, reuse, roadway and stormwater improvements shall be in general accordance with the City's adopted planning documents.

Should any design be submitted which varies appreciably from the standards set herein or uses materials other than those recommended, it should be accompanied by appropriate supporting documentation or engineering studies and must be approved by the City of Leesburg, the Director of Environmental Services and/or the Director of Public Works.

Please note that all plans submitted for review must be in conformance with all Federal, State, County, and City regulations and codes. Minimum standards will not be less than those established by recognized private and governmental agencies, unless stated otherwise in these specifications.